

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

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PERFECT CURVE, INC.,)	
)	
Plaintiff/Counterclaim Defendant,)	Civil Action No.
)	12-11050-FDS
v.)	
)	
HAT WORLD, INC.,)	
)	
Defendant/Counterclaim Plaintiff.)	
)	

MEMORANDUM AND ORDER ON CLAIM CONSTRUCTION

SAYLOR, J.

This is a patent dispute involving two competing products that allow retail stores and private collectors to store and display hats, particularly baseball caps. Plaintiff Perfect Curve, Inc. possesses a patent that covers its product. It seeks a judgment that another hat display product, manufactured and sold by defendant Hat World, Inc., infringes upon its patents. Hat World has asserted, among other things, non-infringement and invalidity of Perfect Curve’s patent.

The parties’ allegations hinge in part on the construction of the claims in Perfect Curve’s U.S. Patent No. 6,223,910 (the “’910 patent”). The Court conducted a *Markman* hearing on the construction of the relevant claims on May 10, 2013.

Perfect Curve and Hat World dispute eight terms: (1) “pair of forwardly extending fingers” and “fingers”; (2) “narrow slot”; (3) “a pair of . . . jaws”; (4) “the jaws being separable to release their grip on the spine to enable the position of the cap holder to be adjusted along the spine”; (5) “normally clamp”; (6) “a crown support having an upper surface shaped to support a

crown of a partially folded cap, the horizontal dimensions of the support being sufficient to contact and support the partially folded cap over an area sufficiently broad to resist deformation of the shape of the cap under the influence of the weight of the cap”; (7) “a crown support having an upper surface shaped and having a sufficient width and depth to receive and support a partially-folded crown of a cap”; and (8) “approximately triangular shaped.”¹

I. Background

Plaintiff Perfect Curve is a business engaged in the development and sale of products related to the care and storage of baseball caps. Among other things, plaintiff sells a “Cap Rack” used for storing, displaying, and organizing baseball caps. (Compl. ¶ 5). The rack consists of a spine-like support to which individual cap supports can be attached and detached.² On May 1, 2001, the United States Patent and Trademark Office issued United States Patent No. 6,223,910 (the “’910 patent”), which covers technology incorporated into the “Cap Rack” product. Perfect Curve owns the ’910 patent.

Defendant Hat World is a retailer that sells baseball caps in its stores throughout the United States, including stores formerly owned by competitor Lids, Inc. Between 1995 and 2011, Hat World purchased various Perfect Curve cap care and storage products, including the

¹ The parties initially requested construction of three additional terms, but have since agreed to construe those terms as follows:

“elongate spine” – “an elongate support capable of being mounted vertically or horizontally”;

“pads” – “the surface of the fingers that grip and clamp the cap”; and

“connector detachably connectable to the spine” – “connector capable of connecting to and disconnecting from the spine to enable the position of the holder to adjusted along the spine.”

² Diagrams of the patented device, as well as images of the Perfect Curve “Cap Rack,” are attached as Appendix A.

“Cap Rack,” for sale and use in its stores.

Since 2011, Hat World has sold its own line of hat care and storage products. Perfect Curve alleges that these products are “substantially identical in packaging, appearance, and design to Perfect Curve’s products.” (Compl. ¶ 15).

II. Legal Framework

The construction of claim terms is a question of law. *Markman v. Westview Instruments*, 517 U.S. 370, 372 (1996) (“[T]he construction of a patent, including terms of art within its claim, is exclusively within the province of the court.”).

In *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*), the Federal Circuit clarified the proper approach to claim construction and set forth principles for determining the hierarchy and weight of the definitional sources that give a patent its meaning. The guiding principle of construction is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of . . . the effective filing date of the patent application.” *Id.* at 1313. Courts thus seek clarification of meaning in “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.* at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

A. The Words of the Claims Themselves

The claim construction analysis normally begins with the claims themselves.³ The claims of a patent “define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312 (citing *Innova*, 381 F.3d at 1115).

A court may construe a claim term to have its plain meaning when such a construction resolves a dispute between the parties. *See O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008); *see also U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, . . . [but] is not an obligatory exercise in redundancy.”).

In some instances, it is the arrangement of the disputed term in the claims that is dispositive. “This court’s cases provide numerous . . . examples in which the use of a term within the claim provides a firm basis for construing the term.” *Phillips*, 415 F.3d at 1314. For example, because claim terms are normally used consistently throughout the patent, the meaning of a term in one claim is likely the meaning of that same term in another. *Id.* In addition, “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that

³ In *Phillips*, the Federal Circuit discredited the practice of starting the claim construction analysis with broad definitions found in dictionaries and other extrinsic sources:

[I]f the district court starts with the broad dictionary definition . . . and fails to fully appreciate how the specification implicitly limits that definition, the error will systematically cause the construction of the claim to be unduly expansive. The risk of systematic overbreadth is greatly reduced if the court instead focuses at the outset on how the patentee used the claim term in the claims, specification, and prosecution history, rather than starting with a broad definition and whittling it down.

Id. at 1321. Of course, if no special meaning is apparent after reviewing the intrinsic evidence, claim construction might then “involve[] little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314.

the limitation in question is not present in the independent claim.” *Id.* at 1314-15.

B. The Specification

“The claims, of course, do not stand alone.” *Id.* at 1315. Rather, “they are part of a fully integrated written instrument, consisting principally of a specification that concludes with the claims.” *Id.* (internal citations and quotations omitted). For that reason, the specification must always be consulted to determine a claim’s intended meaning. “[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Id.* (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

“In general, the scope and outer boundary of claims is set by the patentee’s description of his invention.” *On Demand Mach. Corp. v. Ingram Indus.*, 442 F.3d 1331, 1338 (Fed. Cir. 2006); *see also Phillips*, 415 F.3d at 1315-1317 (“[T]he interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim”). “[T]he specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess.” *Phillips*, 415 F.3d at 1316. It may also reveal “an intentional disclaimer, or disavowal, of claim scope by the inventor.” *Id.* Therefore, the claims are to be construed in a way that makes them consistent with, and no broader than, the invention disclosed in the specification. *On Demand*, 442 F.3d at 1340 (“[C]laims cannot be of broader scope than the invention that is set forth in the specification.”); *Phillips*, 415 F.3d at 1316 (“[C]laims must be construed so as to be consistent with the specification, of which they are a part.”).

Nevertheless, courts must be careful to “us[e] the specification [only] to interpret the

meaning of a claim” and not to “import[] limitations from the specification into the claim.”

Phillips, 415 F.3d at 1323; *see also Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1375 (Fed. Cir. 2005) (internal quotations omitted). A patent’s “claims, not specification embodiments, define the scope of patent protection.” *Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009); *see also Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1381 (Fed. Cir. 2009) (“[E]mbodiments appearing in the written description will not be used to limit claim language that has broader effect.”). “In particular, we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.” *Phillips*, 415 F.3d at 1323. This is “because persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments.” *Id.*

Although this distinction “can be a difficult one to apply in practice[,] . . . the line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court's focus remains on understanding how a person of ordinary skill in the art would understand the claim terms.” *Id.* Ultimately, “[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.” *Id.* at 1316 (citing *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

C. The Prosecution History

After the specification and the claims themselves, the prosecution history is the next best indicator of term meaning. The prosecution history consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.

Id. at 1317. “Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” *Id.* “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.* (citing *Vitronics*, 90 F.3d at 1582-83).

However, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* As a result, courts generally require that “a patent applicant [] clearly and unambiguously express surrender of [a] subject matter” to disavow claim scope during prosecution. *Voda v. Cordis Corp.*, 536 F.3d 1311, 1321 (Fed. Cir. 2008) (quoting *Sorensen v. Int’l Trade Comm’n*, 427 F.3d 1375, 1378 (Fed. Cir. 2005)).

D. Extrinsic Sources

Extrinsic evidence consists of “all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Phillips*, 415 F.3d at 1317. It “can help educate the court regarding the field of the invention and can help the court determine what a person of ordinary skill in the art would understand claim terms to mean.” *Id.* at 1319. However, extrinsic evidence suffers from a number of defects, including its independence from the patent, potential bias, and varying relevance. *Id.* at 1318-19. Such evidence is therefore “unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence,” and courts may consider, or reject, such evidence at their discretion. *Id.* at 1319.

III. Analysis

The proposed constructions of the disputed terms in the '910 patent are as follows:

CLAIM TERM	PERFECT CURVE'S PROPOSED CONSTRUCTION	HAT WORLD'S PROPOSED CONSTRUCTION
"pair of forwardly extending fingers"/ fingers	"two distinct forwardly extending projections that diverge from a common starting location"	"two distinct forwardly extending projections that are not connected at their forward ends"
"narrow slot"	"a small opening that is adapted to facilitate entry"	"a small space separating the forward most ends of the fingers"
"a pair of . . . jaws"	"two opposing grippers that grip the spine"	"two opposing grippers that substantially separate from each other in order to open and collapse substantially towards each other to close."
"the jaws being separable to release their grip on the spine to enable the position of the cap holder to be adjusted along the spine"	"the two opposing grippers can be moved a distance apart from each other to release from the spine in order to enable the position of the cap holder to be adjusted along the spine"	"two opposing grippers that substantially separate from each other in order to open and collapse substantially towards each other to close, the grippers are biased towards each other to grip the spine and must be separated to release the spine in order to allow movement of the cap holder along the spine"
"normally clamp"	"in the absence of external forces, the jaws grip the spine"	indefinite

“a crown support having an upper surface shaped to support a crown of a partially folded cap, the horizontal dimensions of the support being sufficient to contact and support the partially folded cap over an area sufficiently broad to resist deformation of the shape of the cap under the influence of the cap”	“a surface for supporting the crown of a cap from beneath the crown having an area sufficient for the surface to contact and support the crown”	“a surface for supporting the crown of a cap from beneath the crown having a width sufficient for the surface to contact and support the majority of the width of the crown”
“a crown support having an upper surface shaped and having sufficient width and depth to receive and support a partially-folded crown of a cap”	“a surface for supporting the crown of a cap from beneath the crown and having a width and depth sufficient for the surface to receive and support a partially-folded crown of a cap”	“a surface for supporting the crown of a cap from beneath the crown and having a width and depth sufficient for the surface to contact and support the majority of the crown”
“approximately triangular shaped”	“generally shaped as a triangle, which is a figure having three sides and three angles”	“triangularly shaped (three sides, pairs of which intersect at three vertices) such that the rear portion is wider than the forward portion”

A. “Pair of Forwardly Extending Fingers” and “Fingers”

The terms “pair of forwardly extending fingers” or “fingers” appear in the ’910 patent in claims 1, 2, 15, and 17. Their use in claim 1 is typical:

[A] cap supporting device comprising:

...

a crown clip . . . ;

wherein the crown clip comprises **a pair of forwardly extending fingers** biased toward the crown support, the region between the fingers defining a hole and a narrow slot extending forwardly from the hole.

U.S. Patent No. 6,223,910 at 7:65-8:18 (filed May 1, 2001) (emphasis added).

The parties agree that the term describes “two distinct forwardly extending projections.” The disagreement concerns whether the projections merely “diverge from a common starting location,” or whether they by definition “are not connected at their forward ends.”

Hat World contends that the plain and ordinary meaning of the term “fingers” implies that they are not connected at their forward ends. As support for this position, Hat World relies on language and drawings in the specification. The specification indicates that the upper portion of the crown clip “is bifurcated at its forward end to define a pair of forwardly extending fingers.” U.S. Patent No. 6,223,910 at 5:32-34 (filed May 1, 2001). Hat World contends that, in order for the bifurcation to define a “pair of . . . fingers,” those fingers must not be connected at their forward ends.

Hat World also relies on the prosecution history of the ’910 patent. During prosecution, original claims 1 and 23—which made no reference to “fingers”—were initially rejected as anticipated by the prior art. Perfect Curve modified the claims to include, among other things, a claim to “fingers.” The claims were subsequently allowed. Hat World argues that Perfect Curve’s proposed construction for “fingers” is broad enough to encompass the button rings disclosed in the prior art, and thus attempts to claim a breadth that the company previously disclaimed.

Perfect Curve, on the other hand, contends that the term “fingers” dictates only that the projections diverge from a common starting point, and does not concern itself with what happens after the fingers diverge. In support of this contention, Perfect Curve cites to the same specification language as Hat World, supplemented by the dictionary definition of bifurcate—“to divide into two branches or parts.” (See Pl. Op’g Br. at 8).

Perfect Curve also argues that Hat World's construction would render other claim terms superfluous. In particular, Perfect Curve points to the description of a "narrow slot" in claim 1, which is absent in claim 15. Perfect Curve suggests that Hat World's construction of "fingers" would necessarily result in a narrow slot. Thus, it would (1) render the recitation of a slot in claim 1 redundant, and (2) read a "slot" limitation into claim 15 that is not recited in the claim.

Finally, Perfect Curve has submitted expert testimony from Dr. David O. Kazmer in support of its proposed construction. Dr. Kazmer asserts that "[t]he term 'fingers' does not imply or require that the forward ends of the fingers remain disconnected." (Kazmer Decl. ¶ 12). Rather, Dr. Kazmer contends that "the term 'fingers' simply means that the extensions diverge from a common starting location." (Kazmer Decl. ¶ 12).

According to the principles of claim construction, the Court first looks to the ordinary meaning of the term and how it is used in the claims; if this provides a "firm basis for construing the term," then the inquiry is over. *Phillips*, 415 F.3d at 1313. Here, the language of the claims provides guidance as to what is meant by the term "fingers." By describing a "pair" of forwardly extending fingers, the language of the claim itself suggests two distinct structures. The claim goes on to indicate that "*the fingers are separated* by a key-hole slot that includes a button hole" In this context, the claim term suggests that the projections do not simply diverge from a common point, as Perfect Curve argues, but rather remain separated for their full length. Thus, the term's use in the claim strongly suggests two separate projections.

The specification also supports Hat World's proposed definition. The specification clearly indicates that the fingers do not simply begin with a bifurcation; they are *defined* by it. It would be both counterintuitive and illogical to suggest that two projections that are defined by a

division between them may nonetheless be understood to reconnect. Further, the specification indicates that the bifurcation takes place at the clip's "forward *end*." This description simply would not describe an embodiment that consisted of fingers that bifurcated and then reconnected at the end.

Nor does this interpretation of the term render claim 1's description of a "narrow slot" superfluous. There is a broad range of ways in which two objects could be "not connected at their forward ends." The additional language in claim 1 indicates that the separation between the fingers must be a narrow one, and thus retains independent significance.

The Court therefore interprets the terms "pair of forwardly extending fingers" and "fingers" to mean "two distinct forwardly-extending projections that are not connected at their forward ends." Because the terms of the patent itself are sufficiently clear, the Court need not address the prosecution history or the expert testimony submitted by Perfect Curve.

B. "Narrow Slot"

The term "narrow slot" appears in claim 1 of the '910 patent. That claim reads, in relevant part:

A cap supporting device comprising:

. . .

a crown clip . . . ;

wherein the crown clip comprises a pair of forwardly extending fingers biased toward the crown support, the region between the fingers defining a hole and a **narrow slot** extending forwardly from the hole.

U.S. Patent No. 6,223,910 at 7:65-8:18 (filed May 1, 2001)(emphasis added).

Hat World proposes the construction "a small space separating the forward most ends of the fingers." Perfect Curve proposes the construction "a small opening that is adapted to facilitate entry."

Hat World contends that the plain meaning and context of the term “narrow slot” requires that the separation between the forward ends of the fingers be small. In addition to referring to the language of the claim itself, Hat World refers to the dictionary definition of slot as a “narrow opening or groove.” (Pl. Reply Br. at 10).

Perfect Curve contends that its proposed construction is consistent with both the ordinary meaning of the term “narrow slot” and the purpose of the slot. It points to the language of the specification, which explains that

[w]ith those caps having a button, the upward flare of the fingers provides a smooth lead-in by which the button can engage the undersides of the fingers and be advanced into a position within the button hole.

U.S. Patent No. 6,223,910 at 5:40-44(filed May 1, 2001).⁴ The specification goes on to explain that

[i]n the embodiment of the clip shown in [figures] 11-14, the more forwardly disposed forward portions of the button hole defined by the rear portions of the pads 51, adjacent the transition from the button hole to the more narrow slot are flared upwardly and rearwardly to define a smooth lead-out to permit the cap button to slide forwardly under the pads in a smooth, progressive, action, avoiding binding of the button.

U.S. Patent No. 6,223,910 at 75:44-52 (filed May 1, 2001).

The Court finds Hat World’s construction more persuasive. Although Perfect Curve contends that the specification demonstrates that the purpose of the slot is to facilitate entry, the Court does not find support for that proposition in the language of the specification. While the passages quoted above indicate that the upward and rearward flare of the pads on the fingers is designed to provide a smooth lead-in and lead-out, they do not assign any such purpose to the

⁴ The text of the patent specification is interspersed with numbers, which correspond to numeric labels of the elements of the claimed technology in figures in the patent. For ease of reading, the Court has omitted those numbers in its quotations of the patent specification throughout this opinion.

narrow slot. Further, by omitting any reference to the size of the opening, Perfect Curve essentially reads the word “narrow” out of the term.

By defining the term narrow slot with reference to its size and location, Hat World’s construction corresponds with the plain meaning of the term without reading any additional limitations into the term. The Court therefore interprets the term “narrow slot” to mean “a small space separating the forward-most ends of the fingers.”

C. Terms Involving “Jaws”

The parties have asked the Court to construe two similar, and somewhat overlapping, terms: “a pair of . . . jaws” and “the jaws being separable to release their grip on the spine to enable the position of the cap holder to be adjusted along the spine.” Because the terms appear in the same claim and are described in the specification together, the Court will construe them together.

Both terms appear in claim 9 of the ’910 patent; the term “jaws” also appears in claim 10 11, and 12. Claim 9 reads, in relevant part:

A cap supporting device comprising:

...

at least one cap holder . . .

a rearward portion of said at least one cap holder having a connector detachably connectable to the spine, the connector being constructed to enable the location of said at least one cap holder on the spine to be selected independently of the location of the other cap holders,

the connector having **a pair of rearwardly facing jaws** adapted to normally clamp to a vertically oriented portion of the spine, **the jaws being separable to release their grip on the spine to enable the position of the cap holder to be adjusted along the spine.**

U.S. Patent No. 6,223,910 at 8:38-54 (filed May 1, 2001)(emphasis added).

Hat World proposes that the term “a pair of . . . jaws” be given the construction “two

opposing grippers that substantially separate from each other in order to open and collapse substantially towards each other to close.” Perfect Curve proposes the construction “two opposing grippers that grip the spine.” Both sides agree that the jaws grip the spine; the disagreement lies in whether the term’s construction should include language describing how the jaws function.

Hat World proposes that the term “the jaws being separable . . .” be given the construction “two opposing grippers that substantially separate from each other in order to open and collapse substantially towards each other to close, the grippers are biased towards each other to grip the spine and must be separated to release the spine in order to allow movement of the cap holder along the spine.” Perfect Curve proposes the construction “the two opposing grippers can be moved a distance apart from each other to release from the spine in order to enable the position of the cap holder to be adjusted along the spine.”

According to the principles of claim construction, the Court begins by examining the context in which the terms are used in the asserted claim. *Phillips*, 415 F.3d at 1314. In particular, the Court notes the differences between the claimed terms as a useful guide in understanding their meaning. *See id.* In claim 9, the first of the contested terms establishes that the “connector detachably connectable to the spine” is made up in part of a pair of jaws that clamp to the spine. The second of the contested terms goes on to provide information about how the jaws work—it indicates that the jaws are able to move apart from each other in order to release their grip on the spine, enabling the cap holder position to be easily adjusted. Thus, the context of the claim itself appears to indicate a distinction between the two terms: while “a pair of . . . jaws” explains the structural means by which the connector attaches to the spine, “the jaws

being separable . . .” goes on to explain the process by which the jaws allow the cap holder to be adjusted along the spine.

The Court next looks to the specification, as it is “the single best guide to the meaning” of disputed terms. *Phillips*, 415 F.3d at 1315. In discussing the jaws, the specification states that

[t]he spine clamp includes a pair of rearwardly projecting jaws, adapted to grip a vertical spine, and a pair of forwardly projecting, manually grippable tabs. The jaws, tabs, and the bracket are formed to allow for some resilient, flexible movement of the jaws away from or toward each other in response [to] the manual squeezing or releasing, respectively, of the tabs.

U.S. Patent No. 6,223,910 at 4:21-27 (filed May 1, 2001).

The specification goes on to explain how the jaws contribute to the patent’s function. It states that “the jaw mounts should be sufficiently flexible so that when the tabs are squeezed together the jaws release sufficiently from the spine to enable the crown support to be detached from the spine.” U.S. Patent No. 6,223,910 at 4:37-40 (filed May 1, 2001). The specification further indicates that

[w]hen the tabs are squeezed together the jaw mounts of the bracket, to which the jaws and tabs are attached, will twist to enable the jaws to resiliently separate. Upon release of the tabs, the jaws will close to their spine-gripping configuration.

U.S. Patent No. 6,223,910 at 4:54-59 (filed May 1, 2001).

As a threshold matter, the Court rejects the requirement, set forth in Hat World’s proposed construction of both terms, that the grippers “separate substantially” and “collapse substantially.” Hat World has not presented any persuasive support for the “substantially” requirement in the claim itself, the specification, or the prosecution history. At oral argument, Hat World suggested that, in order for the device to detach easily—as provided for in the specification—the jaws necessarily must separate a substantial amount. However, the grippers

need only separate a small amount to overcome the surface tension between themselves and the spine sufficiently to allow the cap holder to be easily removed from the spine. While the description of the jaws certainly requires that they be capable of some amount of separation and collapse, nothing suggests that the movement must be “substantial.”

Once the term “substantially” is removed, the dispute between the parties on the first term essentially turns on whether the term should be construed to include a description of how the jaws work. Hat World would define the term “a pair of . . . jaws” based on their ability to collapse together, and separate, in order to grip or release the spine. Perfect Curve would define the term based on a combination of its structure and its purpose.

While the precise mechanism by which the jaws work is unquestionably discussed in the specification, the context of the terms in the claim itself directs away from a definition of “a pair of . . . jaws” that imports a description of exactly how the jaws work. If the Court were to define “a pair of . . . jaws” as proposed by Hat World, it would essentially eliminate the need for the additional language claiming “the jaws being separable” Rather, the Court finds that the language in the specification discussing the jaws’ ability to separate and collapse is useful in defining the second of the two related terms. Taking the language of the claim and specification together, the Court does not read the term “a pair of . . . jaws” itself to include the functional limitations advocated for by Hat World.

Instead, the Court adopts Perfect Curve’s approach—if not its exact language—of construing “a pair of . . . jaws” to be defined by a combination of its structure and its purpose. The Court will expand slightly on Perfect Curve’s proposed construction—“two opposing grippers that grip the spine”—in order to provide a fuller description of the purpose of the jaws.

The claim makes clear that the essential purpose of the connector is to be “detachably connectable.” Because the jaws are the portion of the connector that both connects to and detaches from the spine, there are two characteristics that are central to the jaws’ ability to perform their central purpose: first, they must be able to grip the spine; second, they must be able to release it. Perfect Curve’s definition correctly indicates that the term describes two opposing grippers that grip the spine. However, the claim and specification make clear that one of the device’s central features is that the jaws allow the cap holder to be repeatedly attached to *and detached from* the spine without affecting any of the adjacent cap holders. Thus, it is not sufficient to define the pair of jaws solely by their ability to grip the spine. The Court therefore interprets the term “a pair of . . . jaws” to mean “two opposing grippers that are capable of gripping and releasing the spine.”

The term “the jaws being separable . . . along the spine” adds to the previous term by explaining precisely *how* the grippers accomplish their purpose. As the descriptions set forth in the specification make clear, they do not simply grip and release the spine in a generic way. They grip because they are biased toward each other, and release because they are capable of being separated from each other.

Both parties’ proposed constructions attempt to capture this process. Having rejected Hat World’s inclusion of the word “substantially,” there appears to be very little substantive difference between the two parties’ constructions. The most significant difference is that Perfect Curve’s proposal focuses specifically on the process by which the grippers release the spine, whereas Hat World’s describes both the process by which they grip and the process by which they release. Perfect Curve’s focus on the release of the spine is more closely connected to the

claim term itself, which focuses on the separability of the jaws. Accordingly, the Court will construe “the jaws being separable to release their grip on the spine to enable the position of the cap holder to be adjusted along the spine” to mean “the two opposing grippers can be moved a distance apart from each other to release from the spine in order to enable the position of the cap holder to be adjusted along the spine.”

D. “Normally Clamp”

The term “normally clamp” also appears in claim 9 of the ’910 patent. Claim 9 reads, in relevant part:

A cap supporting device comprising:

...

at least one cap holder . . .

a rearward portion of said at least one cap holder having a connector detachably connectable to the spine, the connector being constructed to enable the location of said at least one cap holder on the spine to be selected independently of the location of the other cap holders,

the connector having a pair of rearwardly facing jaws adapted to **normally clamp** to a vertically oriented portion of the spine

U.S. Patent No. 6,223,910 at 8:38-52 (filed May 1, 2001)(emphasis added).

Perfect Curve proposes the construction “in the absence of external forces, the jaws grip the spine.” Hat World contends that the term is indefinite, and therefore renders claim 9 of the patent invalid.

A challenge of indefiniteness “requires a determination whether those skilled in the art would understand what is claimed.” *Spansion, Inc. v. International Trade Com’n*, 629 F.3d 1331, 1344 (Fed. Cir. 2010) (quoting *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1332 (Fed. Cir. 2010)). That determination is guided by general principles of claim construction. *Id.*

Hat World contends that the ’910 patent does not provide a meaningful definition of

“normally clamp.” It suggests that the term could take its colloquial meaning of “ordinarily,” it could take the “absent external forces” definition proposed by Perfect Curve, or it could mean “perpendicular to a tangent at a point of tangency.” (Def. Opening Cl. Constr. Br. at 22-23).⁵ Hat World contends that, because the term does not appear in the patent specification, there is no support for Perfect Curve’s proposed construction.

Hat World also contends that the patent prosecution indicates that the term is indefinite. During the course of the prosecution, the patent examiner twice rejected a claim as indefinite because it was “unclear what is meant by ‘normally clamp.’” (Sullivan Decl., Ex. 8 at 7). Perfect Curve never amended the claim or otherwise explained the meaning of “normally clamp”; nonetheless, the patent was allowed.

Under the general principles of claim construction, the Court is guided by the context of the claim term itself. Here, the Court finds the context unambiguous as to the intended meaning of “normally.” The claim describes the jaws as being “adapted to normally clamp to . . . the spine” It then goes on to explain that the jaws are nonetheless “separable to release their grip on the spine.” This context clearly indicates that the term “normally” is intended to communicate that the default, resting position for the jaws is the clamped position.

This interpretation is also supported by the specification. Although the specification does not refer to the word “normally,” it makes clear that, in the absence of external forces, the jaws will be closed. The specification describes that “[t]he spine claim *can be released* . . .” to allow the cap holder to move, U.S. Patent No. 6,223,910 at 2:7-9 (filed May 1, 2001); it further indicates that the cap holder can be moved “while the tabs are squeezed to lighten or release the

⁵ In geometry, the word “normal” is essentially a synonym for perpendicular. For example, a line that meets another at a right angle is said to be perpendicular—or “normal”—to it.

grip of the jaws on the spine, U.S. Patent No. 6,223,910 at 6:27-30 (filed May 1, 2001). Taken together, these descriptions would provide those skilled in the art with a clear understanding of what is claimed.

Nor does the cited prosecution history mandate a finding of indefiniteness. Although the patent examiner initially found the term indefinite, Hat World has not presented any evidence to suggest that the examiner did not later reconsider that determination. Indeed, Perfect Curve has pointed to a determination by the examiner that the claims ultimately overcame the § 112 indefiniteness rejection. (Pl. Reply Claim Constr. Br. at 14). Thus, the Court finds that the term is not invalid for indefiniteness.

Indeed, the meaning of “normally clamp” is so clear in context that the Court does not believe there is any potential for it to confuse the jury if not construed. The Court is not required to provide additional language construing a claim if its ordinary meaning can be readily understood by a layperson and adopting it would resolve the parties’ dispute concerning interpretation. *See O2 Micro*, 521 F.3d at 1361; *see also CardioFocus, Inc. v. Cardiogenesis Corp.*, 827 F. Supp. 2d 36, 41 (D. Mass. 2011) (holding that when “claim terms do not implicate any special knowledge possessed by a person in the art and, thus, should be given their ordinary meanings,” and the terms are not “ambiguous or uncommon,” claim construction is not warranted); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1206-07 (Fed. Cir. 2010) (holding that the district court did not err by not explicitly construing the term “addressed to a client” and relying on its ordinary meaning); *Phillips*, 415 F.3d at 1314 (“In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the

application of the widely accepted meaning of commonly understood words.”).

Adopting the ordinary meaning of the term “normally clamp” would resolve the dispute. There is very little concern that the jury’s general understanding of the term, without further interpretation by the Court, would not comport with its use in the claims or would differ from the meaning given to it by those skilled in the art. Accordingly, the Court will not construe the term “normally clamp.”

E. Terms Involving “Crown Support”

The parties have asked the Court to construe two terms concerning the device’s “crown support.” The first term, which appears in claim 1 of the ’910 patent, is

a crown support having an upper surface shaped to support a crown of a partially folded cap, the horizontal dimensions of the support being sufficient to contact and support the partially folded cap over an area sufficiently broad to resist deformation of the shape of the cap under the influence of the weight of the cap.

U.S. Patent No. 6,223,910 at 8:4-10 (filed May 1, 2001)(emphasis added).

Perfect Curve proposes the construction “a surface for supporting the crown of a cap from beneath the crown having an area sufficient for the surface to contact and support the crown.to support the crown portion of a partially folded cap.” Hat World proposes the construction “a surface for supporting the crown of a cap from beneath the crown having a width sufficient for the surface to contact and support the majority of the width of the crown.”

The second term, which appears in claim 15 of the ’910 patent, is “a crown support having an upper surface shaped and having sufficient width and depth to receive and support a partially-folded crown of a cap.” U.S. Patent No. 6,223,910 at 9:10-12 (filed May 1, 2001).

Perfect Curve proposes the construction “a surface for supporting the crown of a cap from beneath the crown and having a width and depth sufficient for the surface to receive and

support a partially-folded crown of a cap.” Hat World proposes the construction “a surface for supporting the crown of a cap from beneath the crown and having a width and depth sufficient for the surface to contact and support the majority of the crown.”

As noted above, the Court first looks to how the terms are used in the claims. The terms are very similar, and somewhat confusingly worded, making it difficult to determine what differences between them are material, and what are not. For example, the first term refers to “a crown of a partially folded cap,” whereas the second term refers to “a partially-folded crown of a cap.” While surely the difference between these terms has no real significance, such inconsistencies in the language makes it somewhat difficult to determine the similarities and differences between the two claims.

The claims each appear to provide a function-driven description of the size and shape of the upper surface of the crown support:

CLAIM #	PURPOSE OF SHAPE	PURPOSE OF SIZE
1	shaped to support a crown of a partially folded cap	horizontal dimensions sufficient to contact and support the cap over an area sufficiently broad to resist deformation of the shape of the cap
15	shaped to receive and support a partially-folded crown of a cap	sufficient width and depth to receive and support a partially-folded crown of a cap

Once the terms are approached in this way, a few differences between them become clearer. Most obviously, the first term includes a size limitation that is not mentioned in the second—the upper surface of the crown support is intended to be broad enough to “resist deformation of the shape of the cap.” The first term also claims dimensions sufficient to *contact*

and support the cap, whereas the second term does not mention contact, and instead claims dimensions sufficient to *receive* and support the cap. Thus, there appear to be at least minor differences between the claimed terms, which should be reflected in the Court's construction.

The Court's construction of each term is also informed by the teachings of the specification. The specification does not differentiate between the two terms; rather, the relevant language from the specification will be considered with respect to both terms. First, the specification states that "the crown support is configured to provide a broad area of support to maintain the cap in its proper shape while it is stored in the device." U.S. Patent No. 6,223,910 at 1:62-66 (filed May 1, 2001). It goes on to explain that "[t]he lateral width of the crown support and the extent to which it projects forwardly is selected to provide a firm, broad area of support for the major portion of the partially-folded cap sufficient to maintain the cap shape." U.S. Patent No. 6,223,910 at 3:50-53 (filed May 1, 2001).

At least with respect to the first term, the parties dispute whether the claim describes only the width of the crown support's upper surface, or both its width and depth. Perfect Curve proposes a construction that discusses the "width and depth" of the surface, whereas Hat World's construction discusses only the "width." Both the claim itself, and the specification, suggest that Perfect Curve's interpretation is correct. The claim refers to the horizontal dimensions of the support, suggesting that more than one dimension is claimed. Further, the specification refers to a broad area of support, and discusses both the lateral width and forward projection of the support. Thus, the term concerns itself with both the width and the depth of the support.

The parties also disagree as to whether the terms require that the surface be sufficient to support the *majority* of the width of the crown. Hat World contends that the specification's description of the surface as providing support for "the major portion of the partially folded cap"

mandates such a construction. Perfect Curve maintains that the term “major” signifies only a “prominent or significant” portion, and not the majority.

The Court might be more inclined to agree with Perfect Curve if the specification indicated that the surface provided support for “a” major portion of the cap. However, by referencing “the” major portion of the cap, the specification implicitly sets up a comparison between the major portion of the cap—which is supported—and the (presumably) minor portion of the cap left unsupported. In that, context, the Court finds Hat World’s interpretation more persuasive.

The parties also discuss the prosecution history of the claim. Specifically, Hat World contends that Perfect Curve differentiated their invention from the prior art by arguing that the prior art did not support the cap over a broad area to resist deformation. Because the Court already determined that the claims themselves require the device to support a cap over a broad area, the Court finds this prosecution history to be in keeping with the other intrinsic evidence.

To summarize, the Court interprets the first term to: (1) govern the shape of the support; (2) govern both the width and depth of the support; (3) concern itself with contacting and supporting the cap; (4) require that a majority of the crown be contacted and supported; and (5) require that the support be sufficient to resist deformation of the shape of the hat. The Court interprets the second term to: (1) govern the shape of the support; (2) govern both the width and depth of the support; (3) concern itself with receiving and supporting the cap; and (4) require that a majority of the crown be received and supported. As neither parties’ proposed construction includes all of these elements, the Court will not adopt either proposed construction.

Accordingly, the Court interprets “a crown support having an upper surface shaped to support a crown of a partially folded cap, the horizontal dimension of the support being

sufficient to contact and support the partially folded cap over an area sufficiently broad to resist deformation of the shape of the cap under the influence of the weight of the cap” to mean “a surface shaped to support the crown of a partially-folded cap that has a width and depth that is sufficient to contact and support the majority of a partially-folded crown of a cap and to resist deformation of the shape of the cap.” The Court interprets “a crown support having an upper surface shaped and having sufficient width and depth to receive and support a partially-folded crown of a cap” to mean “a surface that is shaped to support the crown of a partially-folded cap, and that has a width and depth sufficient to receive and support the majority of a partially-folded crown of a cap.”

F. “Approximately Triangular Shaped”

The term “approximately triangular shaped” appears in claim 6 of the ’910 patent. Claim 6 reads, in relevant part, “[a] device as defined in claim 1 wherein the support surface is approximately triangularly shaped.” U.S. Patent No. 6,223,910 at 8:30-31 (filed May 1, 2001).

Perfect Curve contends that no construction is necessary; to the extent that construction is required, it proposes the construction “generally shaped as a triangle, which is a figure having three sides and three angles.” Hat World proposes the construction “triangularly shaped (three sides, pairs of which intersect at three vertices) such that the rear portion is wider than the forward portion.”

As discussed above, the Court is not required to provide additional language construing a claim if its ordinary meaning can be readily understood by a layperson and adopting it would resolve the parties’ dispute concerning interpretation. *See O2 Micro*, 521 F.3d at 1361. Adopting the ordinary meaning of the term “approximately triangular shaped” would resolve the dispute. Although Hat World contends that the support must be shaped “such that the rear

portion is wider than the forward portion,” that interpretation is not supported by the patent itself. While the specification indicates that “[i]n the preferred embodiment the crown support is wider in its rearward portion than in its more forward portion,” U.S. Patent No. 6,223,910 at 3:53-58 (filed May 1, 2001), the Court will not read limitations directed to the preferred embodiment into the claim as a whole. Further, the doctrine of claim differentiation encourages courts to use differences among claims as a guide in understanding the meaning of a claim term. *See Phillips*, 415 F.3d at 1314-15. Here, claim 5 refers to a device “wherein the crown support is wider at its rear portion than at its more forwardly disposed portion.” Thus, it appears unlikely that the inventor’s intended to claim the same configuration in claim 6.

The ordinary meaning of the term can be readily understood by the jury. Accordingly, the Court will not construe the term “approximately triangular shaped.”

IV. Conclusion

For the foregoing reasons, the disputed claim terms are construed as follows:

1. the terms “pair of forwardly extending fingers” and “fingers” mean “two distinct forwardly extending projections that are not connected at their forward ends”;
2. the term “narrow slot” means “a small space separating the forward-most ends of the fingers”;
3. the term “a pair of . . . jaws” means “two opposing grippers that are capable of gripping and releasing the spine”;
4. the term “the jaws being separable to release their grip on the spine to enable the position of the cap holder to be adjusted along the spine” means “the two opposing grippers can be moved a distance apart from each other to release from the spine in order to enable the position of the cap holder to be adjusted along the spine”;

5. the “normally clamp” has its ordinary meaning and need not be given special construction by the Court;

6. the term “a crown support having an upper surface shaped to support a crown of a partially folded cap, the horizontal dimensions of the support being sufficient to contact and support the partially folded cap over an area sufficiently broad to resist deformation of the shape of the cap under the influence of the weight of the cap” means “a surface shaped to support the crown of a partially-folded cap that has a width and depth that is sufficient to contact and support the majority of a partially-folded crown of a cap and to resist deformation of the shape of the cap”;

7. the term “a crown support having an upper surface shaped and having a sufficient width and depth to receive and support a partially-folded crown of a cap” means “a surface that is shaped to support the crown of a partially-folded cap, and that has a width and depth sufficient to receive and support the majority of a partially-folded crown of a cap”; and

8. the term “approximately triangular shaped” has its ordinary meaning and need not be given special construction by the Court.

So Ordered.

/s/ F. Dennis Saylor
F. Dennis Saylor IV
United States District Judge

Dated: July 29, 2013

APPENDIX A

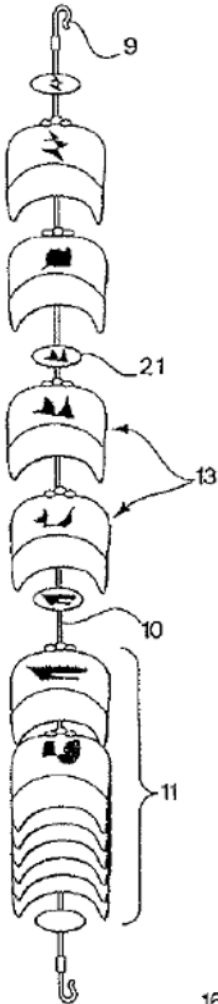


Fig. 1

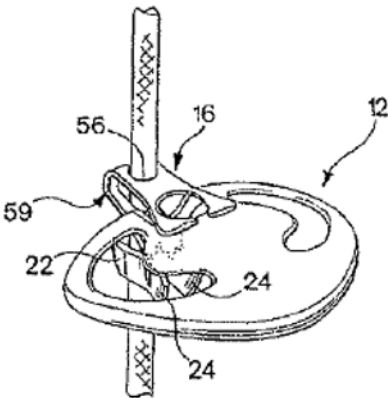


Fig. 1A

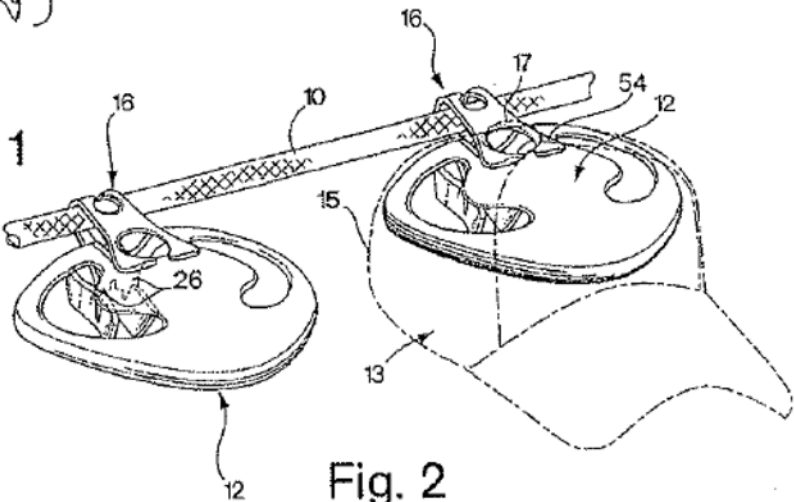


Fig. 2

